

THAT WHICH IS CLAIMED:

1. An apparatus for suspending communication with a hard disk drive in order to transfer data relating to the hard disk drive, the apparatus comprising:

5 a bus having a plurality of lines including at least one control line, said bus disposed in communication with the hard disk drive;

a host for directing communications via said bus with the hard disk drive, said host controlling a state of the at least one control line such that communication with the hard disk drive is supported while the at least one control line is in a first state and

10 communication with the hard disk drive is suspended while the at least one control line is in a second state; and

an intermediate communications gateway disposed between said bus and the hard disk drive, said intermediate communications gateway being responsive to the state of the at least one control line in order to permit communication between said host and the hard disk drive while the at least one control line is in the first state and to isolate the hard disk drive from said bus while the at least one control line is in the second state,

15 wherein said host and said intermediate communications gateway cooperate to communicate data relating to the hard disk drive via said bus while the at least one control line is in the second state.

20 2. An apparatus according to Claim 1 wherein said bus also includes chip select, address and data lines, and wherein said host and said intermediate communications gateway communicate data relating to the hard disk drive via at least one of the chip select, address and data lines while the at least one control line is in the second state.

25 3. An apparatus according to Claim 1 wherein said host provides control signals to said intermediate communications gateway via said bus while the at least one control line is in the second state such that said intermediate communications gateway is capable of subsequently providing instructions to the hard disk drive in accordance with the control signals.

4. An apparatus according to Claim 3 wherein said host provides control signals selected from the group consisting of power control signals, alarm signals, a reset signal and visual indicator signals.

5. An apparatus according to Claim 1 wherein said intermediate communications gateway provides status signals to said host via said bus while the at least one control line is in the second state in response to a query from said host regarding status of the hard disk drive.

6. An apparatus according to Claim 5 wherein said intermediate communications gateway provides status signals selected from the group consisting of a drive presence signal, a failure signal, an alarm signal, a visual indicator status signal, a temperature signal and an operational state signal.

7. An apparatus according to Claim 1 wherein said intermediate communications gateway supports local communication with the hard disk drive while the at least one control line is in the second state and the hard disk drive is isolated from said bus.

8. An apparatus according to Claim 1 wherein said intermediate communications gateway continues to supply power to the hard disk drive while the at least one control line is in the second state and the hard disk drive is isolated from said bus.

9. An apparatus according to Claim 1 wherein said bus is an AT bus disposed in communication with an IDE hard disk drive, and wherein the at least one control line of said AT bus is the RESET line.

10. An apparatus comprising:  
an AT bus having a plurality of lines including a RESET line

an IDE hard disk drive capable of communicating via said AT bus;  
a host for communicating via said AT bus with said IDE hard disk drive, said host capable of alternately asserting and deasserting the RESET line; and  
an intermediate communications gateway disposed between said AT bus and said  
5 IDE hard disk drive, said intermediate communications gateway being responsive to the RESET line in order to permit communication between said host and said IDE hard disk drive while the RESET line is deasserted and to isolate said IDE hard disk drive from said AT bus while the RESET line is asserted,  
wherein said host and said intermediate communications gateway cooperate to  
10 communicate data relating to said IDE hard disk drive via said AT bus while the RESET line is asserted.

11. An apparatus according to Claim 10 wherein said AT bus also includes chip select, address and data lines, and wherein said host and said intermediate  
15 communications gateway communicate data relating to said IDE hard disk drive via at least one of the chip select, address and data lines while the RESET line is asserted.

12. An apparatus according to Claim 10 wherein said host provides control signals to said intermediate communications gateway via said AT bus while the RESET  
20 line is asserted such that said intermediate communications gateway is capable of subsequently providing instructions to said IDE hard disk drive in accordance with the control signals.

13. An apparatus according to Claim 12 wherein said host provides control  
25 signals selected from the group consisting of power control signals, alarm signals, a reset signal and visual indicator signals.

14. An apparatus according to Claim 10 wherein said intermediate communications gateway provides status signals to said host via said AT bus while the  
30 RESET line is asserted in response to a query from said host regarding status of said IDE hard disk drive.

15. An apparatus according to Claim 14 wherein said intermediate communications gateway provides status signals selected from the group consisting of a drive presence signal, a failure signal, an alarm signal, a visual indicator status signal, a temperature signal and an operational state signal.

16. An apparatus according to Claim 10 wherein said intermediate communications gateway supports local communication with said IDE hard disk drive while the RESET line is asserted and said IDE hard disk drive is isolated from said AT bus.

17. An apparatus according to Claim 10 wherein said intermediate communications gateway continues to supply power to said IDE hard disk drive while the RESET line is asserted and said IDE hard disk drive is isolated from said AT bus.

18. A method of suspending communication with a hard disk drive in order to transfer data relating to the hard disk drive, the method comprising:

permitting communications between a host and the hard disk drive via a bus while at least one control line of the bus is in a first state;

detecting a transition of the at least one control line from the first state to a second state;

isolating the hard disk drive from the bus following detection of the transition and while the at least one control line remains in the second state; and

communicating data relating to the hard disk drive via the bus between an intermediate communications gateway and the host while the at least one control line is in the second state and the hard disk drive is isolated from the bus.

19. A method according to Claim 18 wherein the bus also includes chip select, address and data lines, and wherein communicating data while the hard disk drive is isolated from the bus comprises communicating data relating to the hard disk drive

between the host and the intermediate communications gateway via at least one of the chip select, address and data lines.

20. A method according to Claim 18 wherein communicating data while the  
5 hard disk drive is isolated from the bus comprises providing control signals from the host to the intermediate communications gateway via the bus, and wherein the method further comprises subsequently providing instructions from the intermediate communications gateway to the hard disk drive in accordance with the control signals.

10 21. A method according to Claim 20 wherein providing control signals comprises providing control signals selected from the group consisting of power control signals, alarm signals, a reset signal and visual indicator signals.

15 22. A method according to Claim 20 wherein communicating data while the hard disk drive is isolated from the bus comprises providing status signals from the intermediate communications gateway to the host via the bus in response to a query from the host regarding status of the hard disk drive.

20 23. A method according to Claim 22 wherein providing status signals comprises providing status signals selected from the group consisting of a drive presence signal, a failure signal, an alarm signal, a visual indicator status signal, a temperature signal and an operational state signal.

25 24. A method according to Claim 18 further comprising supporting local communications between the intermediate communications gateway and the hard disk drive while the at least one control line is in the second state and the hard disk drive is isolated from the bus.

30 25. A method according to Claim 18 further comprising continuing to supply power to the hard disk drive while the at least one control line is in the second state and the hard disk drive is isolated from the bus.

26. A method according to Claim 18 wherein the bus is an AT bus and the hard disk drive is an IDE hard disk drive, and wherein detecting the transition comprises detecting the transition of the RESET line of the AT bus from the first state in which the
- 5 RESET line is unasserted to the second state in which the RESET line is asserted.